

**Notice of Allowability**

Application No.

09/915,326

Applicant(s)

OMURA, YUSUKE

Examiner

Art Unit

Jacqueline Wilson

2612

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received 05/26/05.
2. ☒ The allowed claim(s) is/are 1-3 and 5-14 (renumbered as 1-13)
3. ☒ The drawings filed on 27 July 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**AUNG MOE**  
**PRIMARY EXAMINER**

## DETAILED ACTION

### *Allowable Subject Matter*

**1. Claims 1-3 and 5-14 are allowed.**

Regarding Claim 1, the prior art neither teaches nor fairly suggests a projection apparatus which projects a pattern image onto an object so as to detect, by a phase difference scheme, a focus state of a phototaking system or observation system, comprising: a first projecting system for projecting a first pattern extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object; and a second projecting system for projecting a second pattern extending in a second direction to a plurality of positions arranged in the second direction and including the central focus detection region on the object, wherein said **first projecting system has a projecting optical element having a plurality of projecting optical axes in the first direction, and said second projecting system has a projecting optical element having a plurality of projecting optical axes in the second direction.**

Regarding Claim 11, the prior art neither teaches nor fairly suggests a projection apparatus which projects a pattern image onto an object so as to detect, by a phase difference scheme, a focus state of a phototaking system or observation system, comprising: a first projecting system for projecting a first pattern extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object; and a second projecting system for projecting a

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second pattern extending in a second direction to a plurality of positions arranged in the second direction and including the central focus detection region on the object, wherein **a difference is generated between brightness of the pattern image projected by one of said first and second projecting systems and that of the pattern image projected by the other projecting system.**

Regarding Claim 12, the prior art neither teaches nor fairly suggests a projection apparatus which projects a pattern image onto an object so as to detect, by a phase difference scheme, a focus state of a phototaking system or observation system, comprising: a first projecting system for projecting a first pattern extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object; and a second projecting system for projecting a second pattern extending in a second direction to a plurality of positions arranged in the second direction and including the central focus detection region on the object, wherein said first projecting system and said second projecting system have light sources which has the same characteristics, said **first and second projecting systems have identical pattern masks** arranged in front of said light sources to form the respective patterns, and projecting optical elements which have the same characteristics and a plurality of projecting optical axes, and **said first and second projecting systems are laid out to be phase-shifted each other by  $90^0$  when viewed from a direction of optical axis.**


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Wilson whose telephone number is (571) 272-7322. The examiner can normally be reached on 8:30am-5:00pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JW  
06/09/05

  
AUNG MOE  
PRIMARY EXAMINER